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07/926,227	08/06/92	GEIGER A	JEN-108

EXAMINER
DELACROIX MUIRHE, C

ART UNIT	PAPER NUMBER
1102	3

DATE MAILED: 11/04/92

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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☑ Notice re Patent Drawing, PTO-948.
3. ☑ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☑ Claims 1-26 are pending in the application.
   Of the above, claims 1-13 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 14-26 are rejected.
5. ☐ Claims _____ are objected to.
6. ☑ Claims 1-26 are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev. 9-89)

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-13, drawn to an apparatus used to perform a photochemical reactor, classified in Class 357, subclass 7+.

II. Claims 14-26, drawn to a method for performing said photochemical reactor, classified in Class 204, subclass 157.15.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (M.P.E.P. § 806.05(e)). In this case the process as claimed can be practiced by another and materially different light waves of a different wavelength.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Giarratana on 10/21/92 a provisional election was made with traverse to prosecute the invention of Group II, claims 14-26. Affirmation

of this election must be made by applicant in responding to this Office action. Claims 1-13 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 14-26 are rejected under 35 U.S.C. § 103 as being unpatentable over Egloff (1,904,362) in view of Bjorkholm (3,617,936).

Egloff discloses a process for hydrocarbon conversion which includes taking hydrocarbon gases, heating them, introducing said gases into a container of reduced pressure and irradiating with ultraviolet light (col. 1, lines 12-25). Egloff does not disclose the use of an OPO as the energy source. This particular

limitation is found in the Bjorkholm reference which discloses an OPO as an instrument of radiation having a "high degree of accuracy" (see APS printed abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the OPO of the Bjorkholm reference with the Egloff reference because Bjorkholm discloses that the OPO is a sufficient radiation source which can be turned to any "desired" frequency.

Claim 17 is rejected under 35 U.S.C. § 103 as being unpatentable over Egloff in view of Bjorkholm as applied to claims 14-26 above, and further in view of Lauer. Lauer discloses a method for the production of ethane from methane using "flash photolysis" of ultraviolet light. Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Lauer with the above mentioned references because Lauer discloses a method for "hydrocarbon conversion" using light in the ultra violet region (see col. 1, lines 10-13 and 39-41).

Claims 22, 24 and 25 recite recirculating residual hydrocarbon gas and 3.0 micron radiation frequency. These would have been obvious to one of ordinary skill in the art because it is not "inventive" to discover, through routine experimentation,

optimum process parameters. See In re Lauer et al. 105 USPQ pp 233-237 (235, first paragraph).

"It is well settled that references are good not only for what they specifically teach or disclose, but also for what they would collectively suggest to one of ordinary skill in the art". See In re Keller, 208 USPQ 871 (CCPA 1981).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cybille Delacvoix-Muirheid whose telephone number is (703) 308-3319.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0662.

Muirheid/mmm
October 28, 1992

John Niebling
Supervisory Patent Examiner
Patent Examining Group 110